

What is claimed is:

1. A lens apparatus comprising:

a fixed member which constitute a body of the apparatus;

first and second lens holding members which hold respective lens units and are movable in the direction of the optical axis with respect to the fixed member; and

a driving member which engage the first and second lens holding members and drives these first and second lens holding members in the direction of the optical axis,

wherein the fixed member is provided with a support portion which supports the first lens holding member in the direction perpendicular to the optical axis, and

the second lens holding member is provided with a first supported portion supported by the first lens holding member in the direction perpendicular to the optical axis and a second supported portion supported by the fixed member in the direction perpendicular to the optical axis at positions separate from each other in the direction of the optical axis and at least two locations around the optical axis.

2. The lens apparatus according to claim 1, wherein a part which supports the second supported portion in the fixed member is formed in the peripheral wall housing the first and second lens holding members in the fixed member.

3. The lens apparatus according to claim 1, wherein the support portion provided in the fixed member and the first supported portion provided in the second lens holding member engage with the same groove portion formed in the first lens holding member in such a way as to extend in the direction of the optical axis.

4. The lens apparatus according to claim 1, wherein the first and second supported portions provided in the second lens holding member are provided with the same phase around the optical axis.

5. The lens apparatus according to claim 1, wherein the fixed member is provided with a housing portion which houses the supported portion of the second lens holding member which has been moved to the fixed member side in the direction of the optical axis.

6. The lens apparatus according to claim 1, wherein the driving member is a cam member which rotates with respect to the fixed member, engages with cam follower portions provided in the first and second lens holding members respectively and drives these first and second lens holding members in the direction of the optical axis.

7. The lens apparatus according to claim 1, wherein the first lens holding member holds the front lens unit of a

plurality of lens units provided in the apparatus.

8. The lens apparatus according to claim 1, wherein both the first and second lens holding members move in the direction of the optical axis during a magnification varying operation.

9. A camera comprising:

the lens apparatus according to claim 1; and  
a recording unit which records an image of an object formed by the lens apparatus.